

1032

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
21 December 2000 (21.12.2000)

PCT

(10) International Publication Number
WO 00/77238 A1

- (51) International Patent Classification⁷: **C12P 21/06**,
21/04, C12N 1/20, 15/00, 15/09, 15/63, 15/70, 15/74,
5/00, 5/02, C07K 1/00, 14/00, 17/00, C07H 21/04, G01N
33/53, 33/567
- (21) International Application Number: **PCT/US00/16559**
- (22) International Filing Date: **15 June 2000 (15.06.2000)**
- (25) Filing Language: **English**
- (26) Publication Language: **English**
- (30) Priority Data:
60/139,528 **16 June 1999 (16.06.1999)** **US**
- (71) Applicant (for all designated States except US): **NEW YORK UNIVERSITY [US/US]; 4 Washington Square, New York, NY 10010 (US).**
- (72) Inventors; and
(75) Inventors/Applicants (for US only): **DEVI, Lakshmi, A. [IN/US]; 9 Glenwood Avenue, New Rochelle, NY 10801 (US). JORDAN, Bryen, A. [US/US]; 243 East 33rd Street, New York, NY 10016 (US).**
- (74) Agents: **FEHLNER, Paul, F. et al.; Darby & Darby, P.C., 805 Third Avenue, New York, NY 10022-7513 (US).**
- (81) Designated States (national): **AU, CA, JP, US.**
- (84) Designated States (regional): **European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).**
- Published:
— *With international search report.*
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

2000077238



WO 00/77238 A1

(54) Title: **HETERODIMERIC OPIOID G-PROTEIN COUPLED RECEPTORS**

(57) Abstract: Opioid receptors form functional heterodimers with each other and with other G-protein coupled receptors, such as dopamine receptors, adrenergic receptors, or chemokine receptors. These receptors can be exploited for high throughput screening of compounds to identify heterodimer opioid receptor modulators (agonists and antagonists). The invention also relates to identification of novel heterodimer receptor ligands and synergistic compositions, which can provide strategies for analgesia, narcotic addiction, hypertension, HIV infection, and immune system function.